

MANUFACTURING EXTENSION PARTNERSHIP

Success Stories from the Field

Powder Coat Specialties LLC

Oregon Manufacturing Extension Partnership

Powder Coat Specialties Reduces Set-Up Time By 80 Percent

Client Profile:

Powder Coat Specialties is a medium-size powder coat painting job shop. Parts vary in size from 24-foot long cyclone fence pipe, to 8-foot by 26-foot wrought iron fence sections, to construction truck racks, to small parts weighting less than one ounce. Powder Coat Specialties was founded in Tualatin, Oregon in 1999 and currently has 15 employees.

Situation:

Powder Coat Specialties manually hangs parts to be painted on wheeled carts and pushes the loaded carts through the various paint process operations, from cleaning to final packaging. The carts are reconfigured for each job based on the shape of the part and how the parts need to be hung for painting. The system takes time to reconfigure, and requires the use of hand tools and loose hardware, which usually have to be relocated with each reconfiguration. The racks are heavy and awkward for the operators to maneuver. At times unsafe rack configurations put operators at risk of being struck by falling parts. Powder Coat Specialties asked the Oregon Manufacturing Extension Partnership (OMEP), a NIST MEP network affiliate, to help it design and produce a new powder coat paint racking system.

Solution:

OMEP previously worked with Powder Coat Specialties to improve processes and workflow. Based on its understanding of previous projects, OMEP developed a design concept, CADD drawings, specified and sourced the purchased components, procured six quotations for fabrication, purchased the materials and managed the fabrication vendors, and provided post operation support to ensure the new design worked as anticipated.

The new rack design significantly reduced the time it takes to reconfigure each job and does not require the use of any hand tools or hardware while still maintaining a firm structural integrity. In addition, the rack can be disassembled and stored by hand.

Results:

Designed a new painting rack.

Reduced reconfiguration time by 80 percent.

Reduced set-up requirements from 2 people and 28 minutes to 1 person and 11

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minutes.

Eliminated the need to use hand tools, clamps, or loose hardware.

Reduced the weight of the racks and handling awkwardness to improve ease of storage.

Eliminated the previously unsafe conditions by stabilizing the rack design.

Increased the number of configurations in which the carts can be set up by 50 percent.

Testimonial:

"Working with the Oregon Manufacturing Extension Partnership was one of the best ideas we had, very professional and easy to work with. They have been a godsend--start to finish OMEP supplied it all."

Rick Kosta, General Manager